**Amendments to the Claims**

Please cancel claim 1.

Please amend claims 2-10 as set forth below.

Please add claims 11-18 as set forth below.

A complete listing of all claims in this application is set forth below. This listing will replace all prior versions, and listings, of claims in the application.

**Listing of Claims**

Claim 1 (canceled).

2. (Currently amended) A system as claimed in claim ~~1~~ 5, in which the marker rings are more reflective than the surface of the shaft on which they are arranged.

3. (Currently amended) A system as claimed in claim ~~1~~ 5, in which there are at least three marker rings.

4. (Original) A system as claimed in claim 3, in which the distance between a first ring and a second ring which is adjacent to the first ring is the same as the distance between the said second ring and a third ring which is adjacent to the second ring on the opposite side of the second ring from the first ring.

5. (Currently amended) ~~A system as claimed in claim 1, which includes~~ A surgical instrument system, which comprises:

a. a tool including an elongate shaft which defines the tool axis, the shaft bearing a plurality of marker rings arranged in a predetermined pattern on the surface of the shaft so that they extend around the shaft axis,

b. at least two receiving devices which are spaced apart for receiving stereoscopic signals from the rings on the tool,

c. a data processor for analysing the signal from the rings and generating information relating to the position and orientation of the tool relative to the receiving device, and

d. a drive unit for imparting rotational motion to the tool.

6. (Currently amended) A system as claimed in claim ~~1~~ 5, in which the planes defined by the axially spaced edges of each ring are parallel to one another and perpendicular to the axis of the shaft.

7. (Currently amended) A system as claimed in claim ~~1~~ 5, in which the rings are marked on a sleeve which is fitted to the surface of the tool.

8. (Currently amended) ~~A system as claimed in claim 1, in which~~ A surgical instrument system, which comprises:

a. a tool including an elongate shaft which defines the tool axis, the shaft bearing a plurality of marker rings arranged in a predetermined pattern on the surface of the shaft so that they extend around the shaft axis,

b. at least two receiving devices which are spaced apart for receiving stereoscopic signals from the rings on the tool, and

c. a data processor for analysing the signal from the rings and generating information relating to the position and orientation of the tool relative to the receiving device,

wherein the tool is a cutting tool.

9. (Currently amended) A system as claimed in claim ~~1~~ 5, in which the data processor is programmed to perform the steps of:

a. locating the axis of the shaft, which will generally extend along a line which is equidistant from the opposite edges (extending parallel to the shaft axis) of the rings, and

b. locating the centre line of each ring, which will intersect the axis of the shaft at a point which is equidistant from the opposite edges (extending perpendicular to the shaft axis) of the rings.

10. (Currently amended) A system as claimed in claim ~~1~~ 5, in which the data processor is programmed to perform the steps of:

a. identifying three generally rectangular areas which represent the rings on the shaft when the shaft is viewed from one side,

b. determining the location of a line on each of the rectangular areas which represents the midpoint of each area, measured parallel to the axis of the tool,

c. determining the angle between the lines on adjacent ones of the rectangles.

11. (New) A system as claimed in claim 5, in which the tool is a cutting tool.

12. (New) A system as claimed in claim 8, in which the marker rings are more reflective than the surface of the shaft on which they are arranged.

13. (New) A system as claimed in claim 8, in which there are at least three marker rings.

14. (New) A system as claimed in claim 13, in which the distance between a first ring and a second ring which is adjacent to the first ring is the same as the distance between the said second ring and a third ring which is adjacent to the second ring on the opposite side of the second ring from the first ring.

15. (New) A system as claimed in claim 8, in which the planes defined by the axially spaced edges of each ring are parallel to one another and perpendicular to the axis of the shaft.

16. (New) A system as claimed in claim 8, in which the rings are marked on a sleeve which is fitted to the surface of the tool.

17. (New) A system as claimed in claim 8, in which the data processor is programmed to perform the steps of:

a. locating the axis of the shaft, which will generally extend along a line which is equidistant from the opposite edges (extending parallel to the shaft axis) of the rings, and

b. locating the centre line of each ring, which will intersect the axis of the shaft at a point which is equidistant from the opposite edges (extending perpendicular to the shaft axis) of the rings.

18. (New) A system as claimed in claim 8, in which the data processor is programmed to perform the steps of:

a. identifying three generally rectangular areas which represent the rings on the shaft when the shaft is viewed from one side,

b. determining the location of a line on each of the rectangular areas which represents the midpoint of each area, measured parallel to the axis of the tool,

c. determining the angle between the lines on adjacent ones of the rectangles.